

Work Order ID 134878

Wednesday, July 22, 2015 4:14:41 PM

134878

Page 1

Item ID: D4092-1

Revision ID:

Item Name: Maintenance Step

Start Date: 7/22/15 Start Qty: 2.00

Required Date: 7/22/15 Req'd Qty: 2.00

Reference:

Accept

N900040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer:

Approvals: Process Plan: MC Date: JUL 23 2015 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4092	B

100	Cut blanks as per folio	0.00
-----	-------------------------	------

100

Bandsaw

Jeaspa Bandsaw

Memo

0.00

12 12 15/08/10

110		0.00
-----	--	------

110

HAAS 1

HAAS CNC vertical machine #1

Memo

Mill as per Dwg and Folio FA935

Dwg Rev: B

Folio rev: AA

Deburr

0.00

12 12 15/08/11

****Grind flush transition machining mark after machining bottom of extrusion, see detail A.****

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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OTHER : _____																									

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Page 2

Setup Start *NS1*

Stop *NS2*

Customer:

Run Start *NR1*

Stop *NR2*

**Insp.
Stamp**

0.00

0.00

Quality Control

0.00

0.00

Quality Control

0.00

0.00

Hand Finishing

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Work Order ID 134878

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134878

Page 3

Item ID: D4092-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Maintenance Step

Start Date: 7/22/15

Start Qty: 2.00

2

Cust Item ID:

Required Date: 7/22/15

Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

155

Wing Walk as per dwg QSI005 4.4 Batch 132599 0.00***155***

HandFinish

Memo

0.00

12

DAS

41

9-89

15-8-17

160

QC3- Inspect Part Finish

0.00

160

QC

Memo

0.00

12

DAS

38

9-89

15-08-17

170

Identify as per dwg & Stock Location: G.A. 0.00***170***

Packaging

Memo

0.00

12

FF

P

AUG 17 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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OTHER : _____																									

Work Order ID 134878

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Page 4

Item ID: D4092-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Maintenance Step
Start Date: 7/22/15 Start Qty: 2.00 *2* Cust Item ID:
Required Date: 7/22/15 Req'd Qty: 2.00 *2* Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.00							
Quality Control									

ms

Aug 17 2015

DS-8-17.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
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OTHER : _____					

Picklist Print

Wednesday, July 22, 2015 4:14:41 PM

Page 1

Work Order ID: 134878

134878

Parent Item: D4092-1

D4092-1

Parent Item Name: Maintenance Step

Start Date: 7/22/15

Required Date: 7/22/15

Start Qty: 2.00

Required Qty: 2.00

Comments:

Ipp Rev:A New Issue 10-05-31 JLM Verified By:DD
REV:B AS PER ECN 11-639 JLM VERIFIED BY:DD

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2761-108		Manufactured	No			100	f	156.1670	2.5	5.263158			

D2761-108

Extrusion (HPK)

Location

MAT051

80206

Loc Qty

156.167

156.167

Loc Code

38,808'

DQA: _____ Date: _____



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Environment ☐	No Re-verification ☐																																																																						
Design ☐	Operator ☐																																																																						
Doc/Data ☐	Offset/Setup ☐																																																																						
Equip/Tooling ☐	Supplier ☐																																																																						
Handling/Pre ☐	Training ☐																																																																						
Material ☐	Use for Testing ☐																																																																						
Internal Transport ☐	Poor Information ☐																																																																						
Tribal Knowledge ☐	Rushing ☐																																																																						
LOA ☐	Product Improvement ☐																																																																						
Substation ☐	Process Improvement ☐																																																																						
Past Expiry Date ☐	Manufacturing Process ☐																																																																						
Misidentified ☐	Past Due ☐																																																																						
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																				
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																				
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																				
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																				
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																				
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																				
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																				
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																				
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																				
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																				
OTHER : _____																																																																							

DART AEROSPACE LTD		Work Order: 134878
Description: Maintenance Step		Part Number: D4092-1
Inspection Dwg: D4092	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

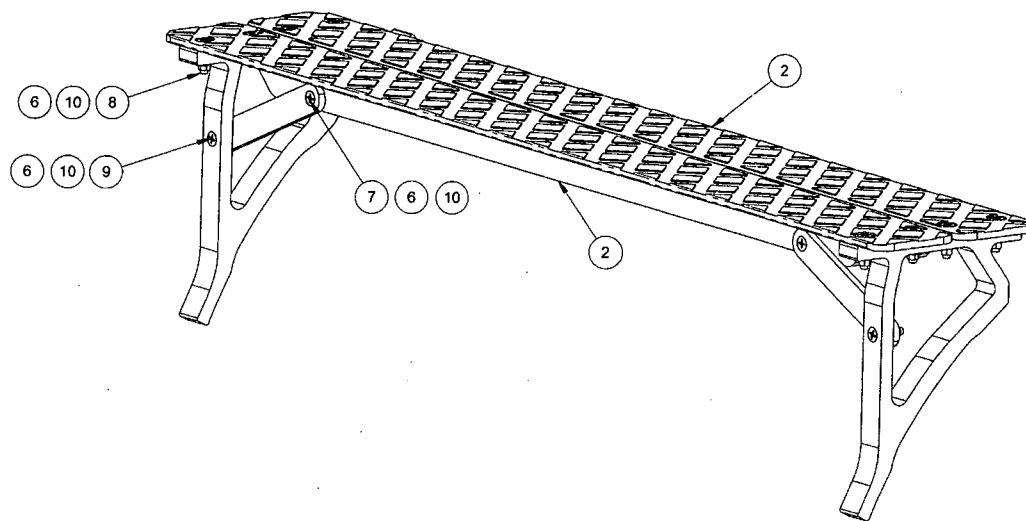
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
30.06	+/-0.030	30.06	✓		MIP-07	Tape
0.19	+/-0.030	0.170	✓		MIP-04	vern
1.25	+/-0.030	1.250	✓			
1.38	+/-0.030	1.380	✓			
0.25	+/-0.030	0.240	✓			
R0.25	+/-0.030	0.250	✓			Radius gauge
2.50	+/-0.030	2.490	✓		MIP-04	vern
Ø0.201	+0.005/-0.001	0.203	✓		...	...
0.30	+/-0.030	0.298	✓		...	...
4.78	+/-0.030	4.780	✓		31006	Height gauge
1.69	+/-0.030	1.690	✓		MIP-04	vern
2.96	+/-0.030	2.960	✓			
0.030	+/-0.010	0.025	✓		MIP-08	Dial depth Mic
0.20	+/-0.030	0.195	✓		MIP-04	vern
0.50	+/-0.030	0.500	✓		...	...
0.035	+/-0.010	0.027	✓		MIP-08	Dial depth Mic
0.390 x 100°	+/-0.010 x 0.5°	0.388 x 100°	✓		MIP-04	vern
1.500	+/-0.030	1.500	✓			
0.50	+/-0.030	0.492	✓			
1.25	+/-0.030	1.250	✓			
0.69	+/-0.030	0.688	✓			
0.38	+/-0.030	0.375	✓			
0.69	+/-0.030	0.688	✓			

Measured by: <i>[Signature]</i>
Date: 15/08/10

Audited by: <i>[Signature]</i>
Date: 15-8-12

Preliminary Approval:
Date:

Rev	Date	Change	Revised by	Approved
A	12.05.15	New Issue	KJ	
B	13.06.18	Dimension 2.96 was 2.69	KJ	<i>[Signature]</i>



D4092-041 MAINTENANCE STEP ASSEMBLY



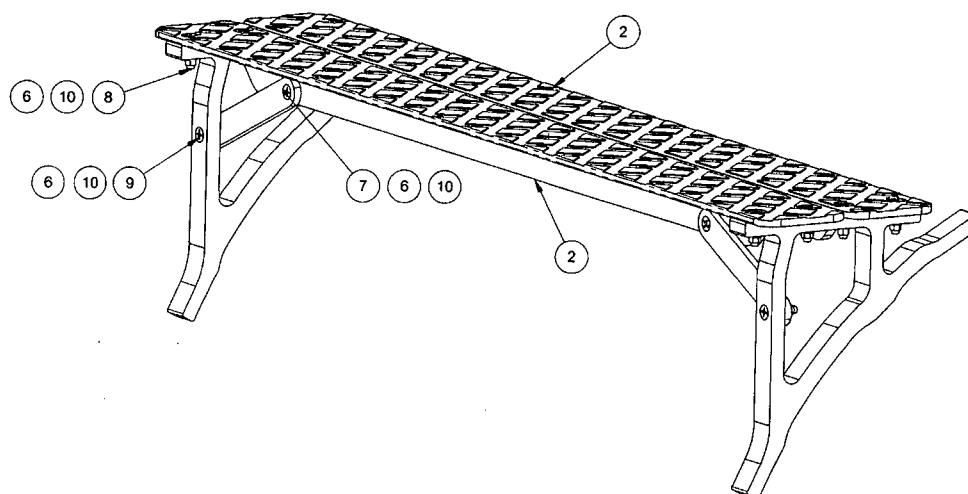
ITEM	QTY -041	PART NUMBER	DESCRIPTION
1	X	D4092-041	MAINTENANCE STEP ASSEMBLY
2	2	D4092-1	MAINTENANCE STEP
3	1	D4093-1	BRACKET
4	1	D4093-3	BRACKET
5	2	D4093-5	BRACE
6	12	MS21042L3	NUT
7	2	MS24694-S54	SCREW
8	8	MS24694-S55	SCREW
9	2	MS24694-S56	SCREW
10	12	NAS1149D0332J	WASHER

134878 M15
15-07-23

RELEASED
2011-09-22

B	REDRAWN; LOWERED FOR AESTHETICS	RF	11.07.27
A	NEW ISSUE	RF	10.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4092	SHEET 1 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	MAINTENANCE STEP ASS'Y	NTS
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ITEM	QTY -042	P/N	DESCRIPTION
1	X	D4092-042	MAINTENANCE STEP ASSEMBLY
2	2	D4092-1	MAINTENANCE STEP
3	1	D4093-1	BRACKET
4	1	D4093-3	BRACKET
5	2	D4093-5	BRACKET
6	12	MS21042L3	NUT
7	2	MS24694-S54	SCREW
8	8	MS24694-S55	SCREW
9	2	MS24694-S56	SCREW
10	12	NAS1149D0332J	WASHER

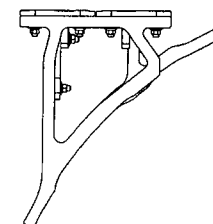
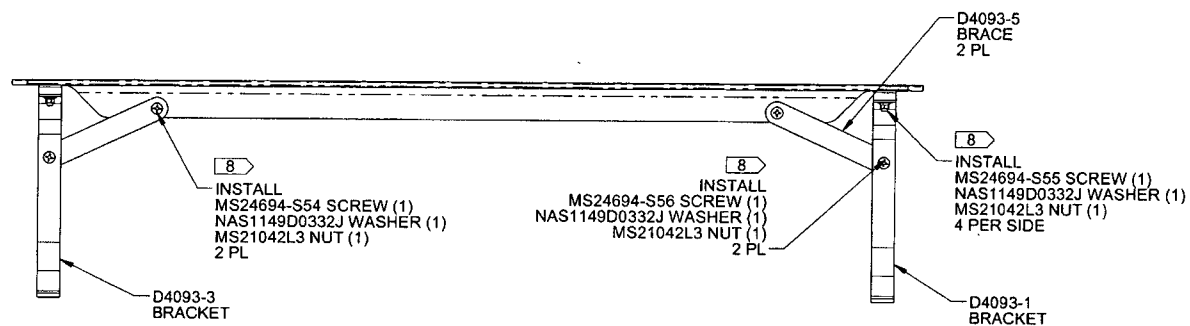
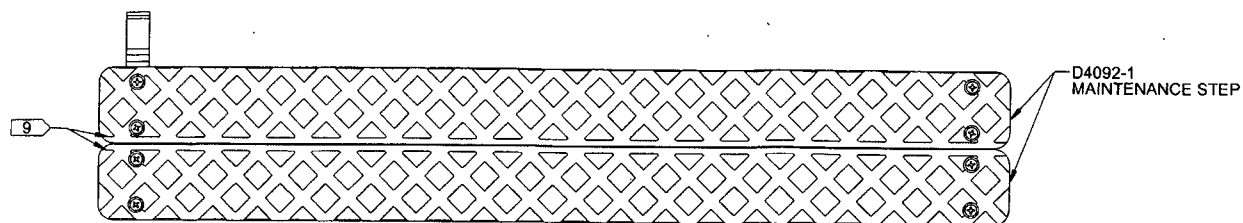


D4092-042 MAINTENANCE STEP ASSEMBLY



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MFG. APPR.	RF	D4092	SHEET 2 OF 6
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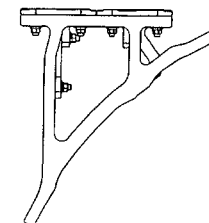
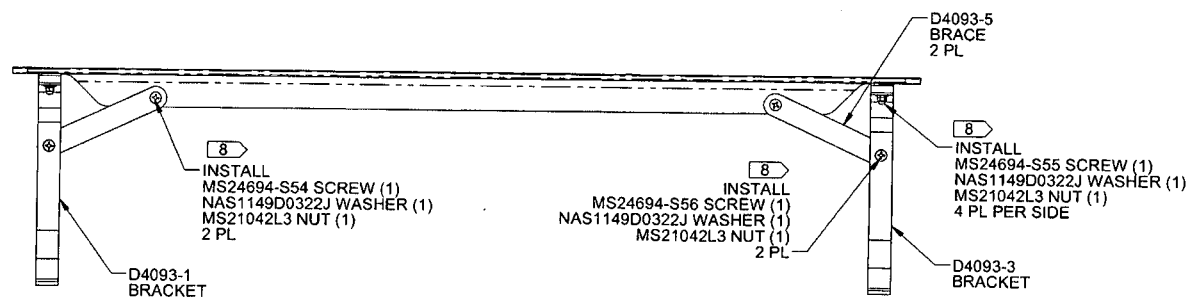
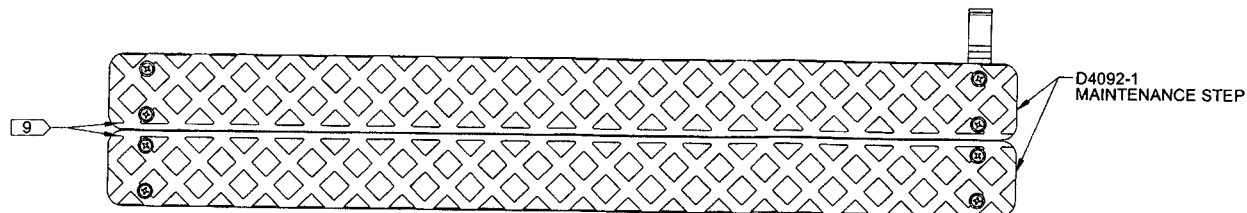
D4092-041 MAINTENANCE STEP ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER QSI 044 6.1
- 7) WEIGHT: 5.37 lbs
- 8) TORQUE SCREWS UP TO 15-25 in-lb (1.7-2.8 N-m)
- 9) GRIP CUTOUT TOWARD CENTER

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	<i>RF</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>RF</i>	D4092	SHEET 3 OF 6
APPROVED	<i>RF</i>	TITLE	SCALE
DE APPR.	<i>RF</i>	MAINTENANCE STEP ASS'Y	NTS
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2011-09-22
MD



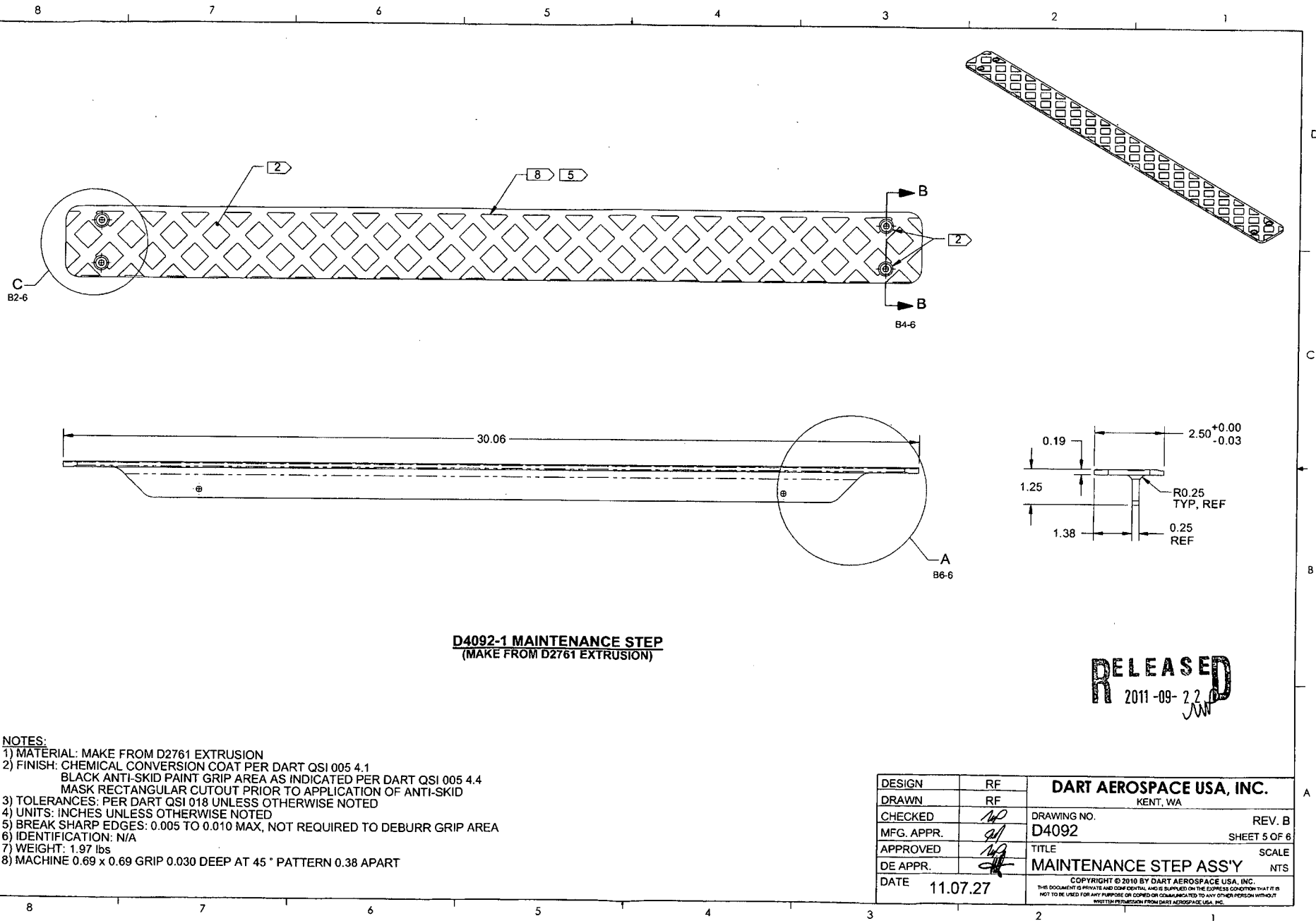
D4092-042 MAINTENANCE STEP ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER QSI 044 6.1
- 7) WEIGHT: 5.37 lbs
- 8) TORQUE SCREWS UP TO 15-25 in-lb (1.7-2.8 N-m)
- 9) GRIP CUTOUT TOWARD CENTER

DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	RF		
CHECKED	<i>MP</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>MP</i>	D4092	SHEET 4 OF 6
APPROVED	<i>MP</i>	TITLE	SCALE
DE APPR.	<i>MP</i>	MAINTENANCE STEP ASSY	NTS
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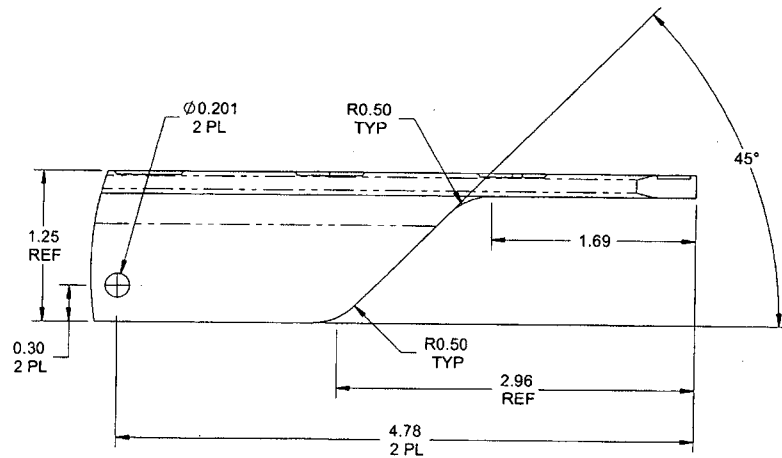


D4092-1 MAINTENANCE STEP
(MAKE FROM D2761 EXTRUSION)

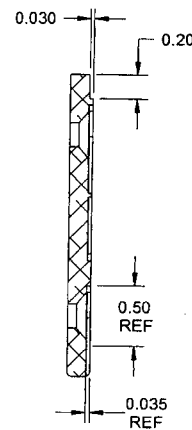
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2011-09-22
JW

- NOTES:**
- 1) MATERIAL: MAKE FROM D2761 EXTRUSION
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
BLACK ANTI-SKID PAINT GRIP AREA AS INDICATED PER DART QSI 005 4.4
MASK RECTANGULAR CUTOUT PRIOR TO APPLICATION OF ANTI-SKID
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX, NOT REQUIRED TO DEBURR GRIP AREA
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.97 lbs
 - 8) MACHINE 0.69 x 0.69 GRIP 0.030 DEEP AT 45 ° PATTERN 0.38 APART

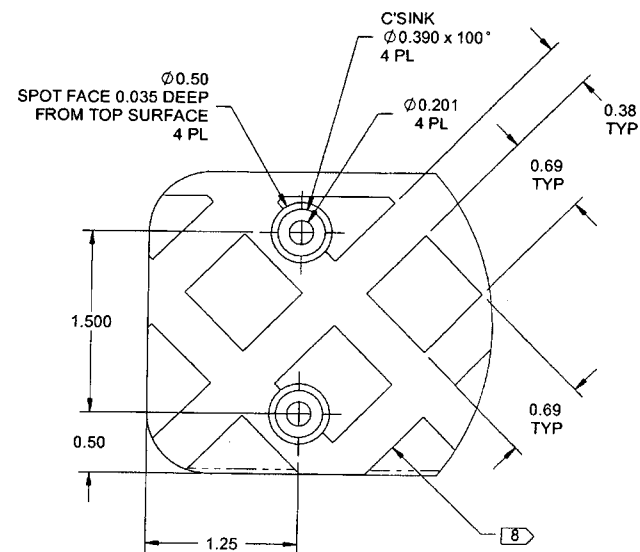
DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	<i>MD</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>MD</i>	D4092	SHEET 5 OF 6
APPROVED	<i>MD</i>	TITLE	SCALE
DE APPR.	<i>MD</i>	MAINTENANCE STEP ASSY	NTS
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DETAIL A B3-5
SCALE 3X, TYP



SECTION B-B C3-5
SCALE 3X, TYP



DETAIL C C8-5
SCALE 3X, TYP

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2011-09-22
MCO

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	<i>MD</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>MD</i>	D4092	SHEET 6 OF 6
APPROVED	<i>MD</i>	TITLE	SCALE
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